



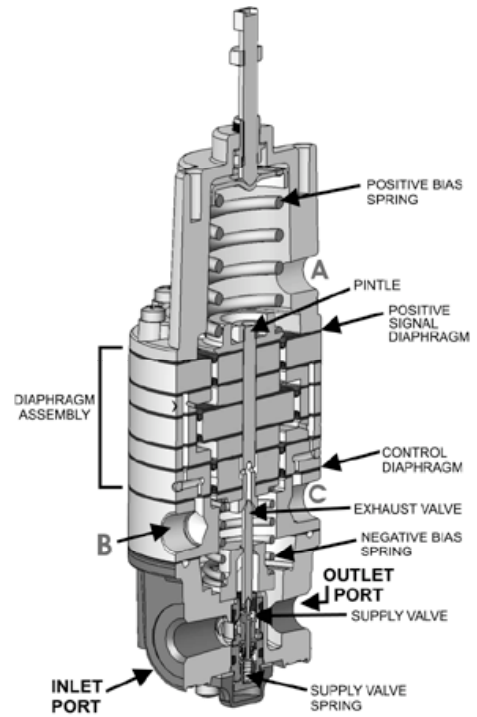
Features

- Small bleed across relief seat assures fast response to small signals
- Multiple inputs allow versatility in process control
- Adjustable Bias Range from -18 to +15 psig permits variation in output
- Two gauge ports located 90° from supply and outlet ports, allows versatility in installation
- Line or Panel Mounting

Operating Principles

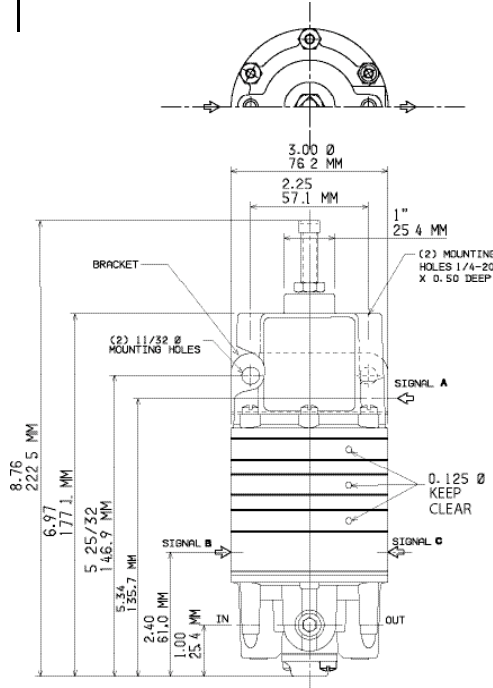
The Model 22 Pneumatic Computing Relay is a highly versatile control valve designed to perform a number of specialized functions, including averaging, differential, inverting, and totalizing. This high quality unit, which offers up to four inputs as well as positive and negative biasing over a broad range, is available in several configurations to meet most application requirements.

The combination of multiple configuration options and accurate response characteristics make the Model 22 the ideal choice in a variety of applications with specific input/output requirements such as override or multi-element control, or as an ON-OFF valve.

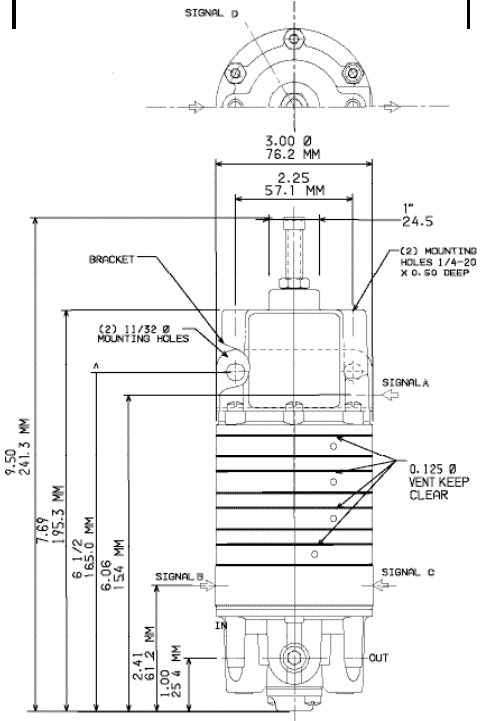


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Model
22

For Models: 22112, 22113, 22212, 22213, 22222, 22223, 22312

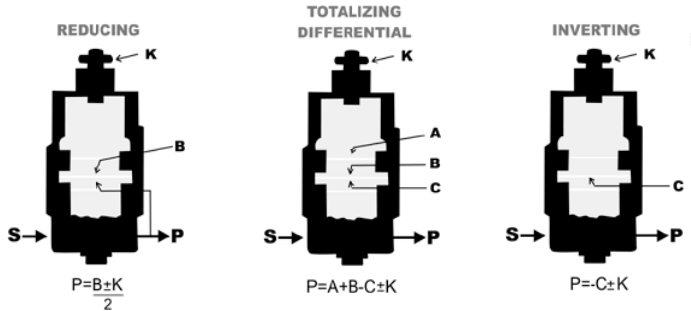
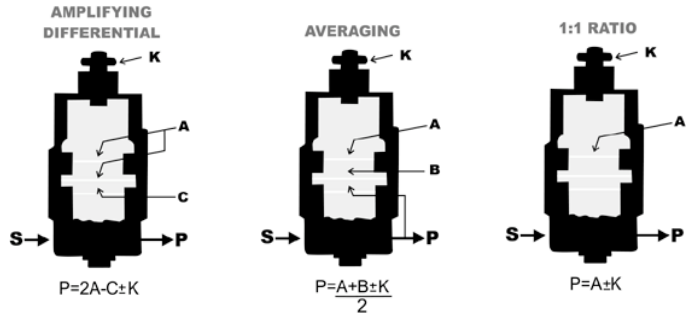
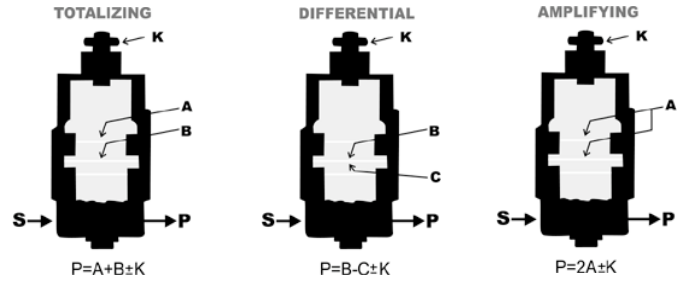
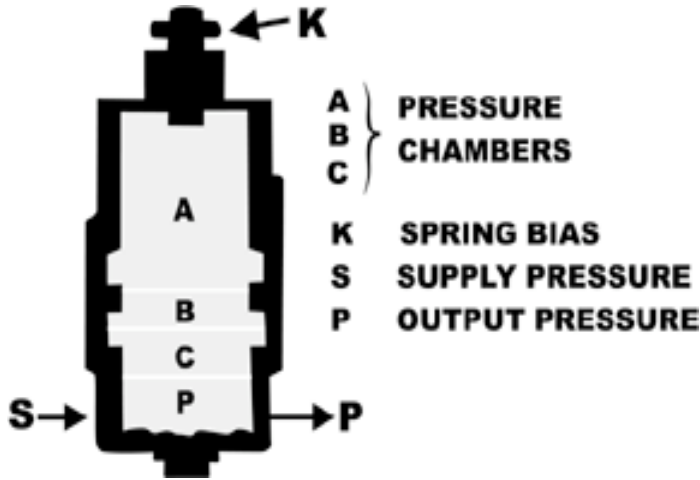


For Models: 22142 & 22422



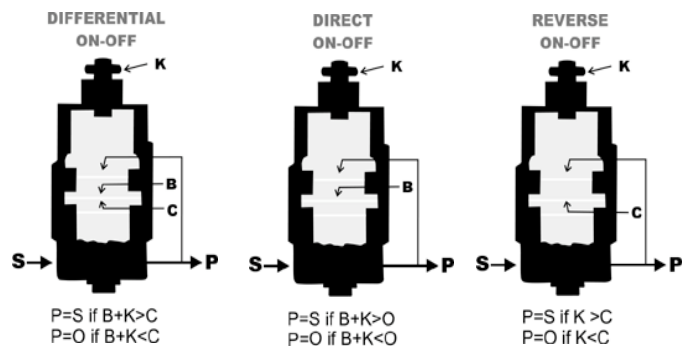
Cross Section

The diagrams show some typical functions and modes of operation for the Model 22. In the equation associated with the diaphragms, P =Output Pressure and A , B , and C =Signal Pressures. K , the constant, is provided by the biasing springs, and is adjustable over a range of -18 psig to +30 psig. S =Supply Pressure



When used as an ON-OFF valve, the Model 22 may open or close a pneumatic circuit, moving rapidly to a full open or a full closed position when signal pressures deviate from set point. In the full open position, the valve passes full supply pressure without modulation or regulation. The function is achieved by connecting output pressure to signal chamber **A**. This connection forms a feedback loop so that, once flow is started, the valve is driven wide open. The relay always goes full open or full closed when conditions are as shown in the diagrams.

NOTE:
Relays reflecting functions identified with prefix numbers 223, 224, 225 and 226 are not shown in this catalog sheet. These units are equipped with additional diaphragms to enable the handling of added signal inputs.



$P=A+B+C+D \pm K$ (not shown)
 $P=A+B-C+D \pm K$ (not shown)

